

STEPHEN E. VANCE, PhD
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OBJECTIVE

A position in finance that utilizes my computational and analytical skills.

QUALIFICATIONS

- Over five years experience in developing and performing simulations.
- Knowledge of derivatives. Wrote computer programs that calculate the value of derivatives using trees, Monte Carlo simulation and finite difference methods.
- Proficient in C++, C, FORTRAN 77 and familiar with HTML, Java.
- Operating Systems and Software: Unix (Linux, Solaris), Windows 98, Mathematica, and LaTeX.
- Excellent communication skills.

EDUCATION

COLUMBIA UNIVERSITY, New York, NY
PhD in Physics, October 1999
MA and MPhil in Physics, May 1998

ANDREWS UNIVERSITY, Berrien Springs, MI
BS in Physics, June 1995
Graduated Summa Cum Laude and with Honors
1994 Barry M. Goldwater Scholar

EXPERIENCE

BROOKHAVEN NATIONAL LABORATORY, Upton, NY 1999-Present
Research Associate, Nuclear Theory Group, Physics Department

- Led a small team in the design and development of a new computer program to simulate high energy collisions of nuclei. Personally responsible for writing and testing the main component that solves a nonlinear equation using Monte Carlo simulation.
- Modified and extended a computer simulation program to demonstrate the effects of several models of particle production in high energy collisions of nuclei.
- Calculated and compared probabilities for proton-nucleus and electron-nucleus interactions.
- Presented research at international conferences in Canada, Hungary and the US.

COLUMBIA UNIVERSITY, New York, NY 1996-1999
Research Assistant, Physics Department

- Developed a model of particle production. Modified and extended a simulation program to show the effects of including this model in high energy collisions of nuclei.
- Devised a test using statistical correlations to identify new physical phenomena in high energy collisions of nuclei.
- Presented research at international conferences in Japan, Hungary, Italy, France and the US.
- Primary author of two papers published in Physical Review Letters and a paper published in Physics Letters B.

COLUMBIA UNIVERSITY, New York, NY 1997-1999
Teaching Assistant, Physics Department

- Taught weekly recitation session and held office hours for a graduate level physics course and a general physics course.